



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/609,913

07/03/2000

Jerry L. Mizell

NORT0027

3274

(11439RRuS02U

7590

01/11/2006

EXAMINER

NG, CHRISTINE Y

Dan C Hu

Trop Pruner & Hu PC

8554 Katy Freeway

Ste 100

Houston, TX 77024

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/609,913		MIZELL ET AL.	
	Examiner		Art Unit	
	Christine Ng		2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 3, 8, 19, 20, 40-43, 46 and 49-51 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0048268 to Menon et al in view of U.S. Patent No. 6,512,756 to Mustajarvi et al.

Referring to claims 2 and 3, Menon et al disclose an access router AR (Figure 5, AR) for use in a mobile communications network having a plurality of cell sites (Figure 5, cell with CPRU, fax, PC, phone). Refer to Section 0169. The AR comprises:

An interface (Figure 24, interface between base station BTS 335 and access router AR 340) adapted to communicate with a base station system (BTS 335) over a network. Refer to Sections 0123, 0292, 0297 and 0302.

A controller (AR 340) adapted to transmit and receive data through the interface over the network with the base station system according to a connectionless, packet-switched protocol (IP). BTS 335 and AR 340 communication over the IP protocol. Refer to Sections 0292, 0297 and 0302.

Wherein the interface includes a connectionless, packet-based protocol layer (IP layer 344) to communicate packets with a connectionless, packet-based protocol layer (IP layer 338) in the base station system. Refer to Sections 0297 and 0302.

Menon et al do not disclose that the AR is a SGSN and that the network is a Gb network.

However, Menon et al disclose in Figure 5 that the access router AR provides the mobile user connection with a private IP network, which further provides access to the Internet through the Internet GW. Refer to Sections 0051 and 0123. The access router AR thus provides a similar operation as a SGSN in a GPRS system. Mustajarvi et al disclose in Figure 1 that a SGSN provides the mobile user MS connection with a GPRS backbone 13 (which can be an IP network), which further provides access to the data network PDN 11 through gateway GGSN. Refer to Column 1, lines 30-52 and Column 8, lines 10-13. Comparing Figure 5 of Menon et al and Figure 1 of Mustajarvi et al, Menon et al disclose a base station 101, an IP interface, an access router, and then a IP network, whereas Mustajarvi et al disclose a base station, a Gb interface, a SGSN, and then a IP network 13. The base station/access router interface is similar to the base station/SGSN Gb interface, since both allow mobile stations access to an IP network. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the AR is a SGSN and that the network is a Gb network; the motivation being that the access router and SGSN provide similar functions.

Referring to claims 8 and 46, Menon et al disclose in Figure 5 a node (BTS 101) for use in a mobile communications network having a system controller (AR). The node (BTS 101) comprises:

One or more radio transceivers (antenna on BTS 101) adapted to communicate with mobile stations (fax, PC, phone). Refer to Section 0123.

A module (BTS 101) coupled to the one of more radio transceivers and adapted to communicate with the system controller (AR 340) according to a packet-switched protocol (IP). Refer to the rejection of claim 2.

Wherein the packet-switched protocol comprises a connectionless, packet-based protocol (IP). Refer to the rejection of claim 2.

Menon et al do not disclose that the communication is done through a Gb interface. Refer to the rejection of claim 2.

Referring to claim 19, Menon et al disclose in Figure 24 a node (access router AR 340) for use in a mobile communications system having base station systems (base station BTS 335). The node comprises:

An interface (IP) to one or more networks (IP network) coupled to the base station systems, the interface comprising a packet-switched element (IP layer 344) to manage communication over a network between the node and at least one of the base station systems. Refer to the rejection of claim 2.

Wherein the packet-switched element comprises an Internet Protocol element (IP layer 344) to communicate packets with an Internet Protocol element (IP layer 338) in the at least one base station system. Refer to the rejection of claim 2.

Menon et al do not disclose that the node is a serving General Packet Radio Service (GPRS) support node. Refer to the rejection of claim 2.

Referring to claim 20, Menon et al disclose in Figure 24 that the SGSN further comprises a User Datagram Protocol transport component (UDP layer 339) to manage connections over the network. Although the UDP layer 339 is in the BTS 335, its services are still used over the interface between BTS 335 and AR 340 since the UDP layer 339 uses the services of the IP layers 338,344 below it. Refer to Sections 0295 and 0296.

Referring to claim 40, Menon et al disclose in Figure 24 that the connectionless, packet-based protocol layer of the interface comprises a network layer (IP layer 344), and the interface further comprises a transport layer (UDP layer 339) to manage connections over the network. Although the UDP layer 339 is in the BTS 335, its services are still used over the interface between BTS 335 and AR 340 since the UDP layer 339 uses the services of the IP layers 338,344 below it. Refer to Sections 0295 and 0296.

Referring to claim 41, Menon et al disclose in Figure 24 that the controller comprises a network services layer (subnetwork protocol layer 343) to transport packets through the transport (UDP layer 339) and network (IP layer 344) layers. The subnetwork protocol layer 343 is below the IP layer 344 and UDP layer 339, so therefore provides services to upper layers. Refer to Sections 0295 and 0298.

Referring to claim 42, refer to the rejection of claims 2, 19, 40 and 41.

Referring to claim 43, refer to the rejection of claim 20.

Referring to claim 49, Menon et al disclose in Figure 24 that the Internet Protocol element (IP layer 344) is adapted to communicate Internet Protocol packets to the Internet Protocol element (IP layer 338) in the at least one base station system.

Menon et al do not disclose the communication is done over a Gb interface.
Refer to the rejection of claim 2.

Referring to claims 50 and 51, refer to the rejection of claims 2 and 46.

3. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0048268 to Menon et al in view of U.S. Patent No. 6,512,756 to Mustajarvi et al, and in further view of U.S. Patent No. 6,763,007 to La Porte et al.

Menon et al do not disclose that each data packet contains Internet Protocol addresses identifying the node and the system controller.

La Porte et al disclose in Figure 19 a data packet has IP addresses identifying the source and destination. An IP packet 612 contains a source address 614 set to the IP address of the source node, a destination address 616 set to the IP address of the destination node, and data payload 618. Refer to Column 33, lines 50-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that each packet contains Internet Protocol addresses identifying the node and the system controller; the motivation that a source and destination field are necessary to determine a route for the data transmission through the network.

4. Claims 21 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0048268 to Menon et al in view of U.S. Patent No.

6,512,756 to Mustajarvi et al, and in further view of U.S. Patent No. 6,320,873 to Nevo et al.

Referring to claim 21, Mustajarvi et al do not disclose that the SGSN further comprises a network services layer to transport data units containing signaling and bearer traffic over the network.

Nevo et al disclose in Figure 2B that the SGSN (Element 52) comprises a network services layer to transport BSSGP packet data units (PDUS) between the BSS and SGSN over a frame relay connection. "The BSSGP layer conveys routing and information related to quality of service (QOS) between the BSS 32 (or BSS 30) and SGSN 52" (Column 7, lines 1-3). Layers shown in Figure 2B are communications protocol layers "required to adapt a signaling and data stream from MS 40 for transport to GPRS 50" (Column 7, lines 61-63). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include that the SGSN comprises a network services layer to transport data units over the network, the motivation being that a network services layer transports BSSGP PDUS between the BSS and SGSN, conveying routing and QOS information. Refer to Column 6, line 60 to Column 7, line 6.

Referring to claim 44, Menon et al do not disclose that the network services layer comprises a General Packet Radio Service network services layer.

Nevo et al disclose in Figure 2B that the SGSN (Element 52) comprises a network services layer to transport BSSGP packet data units (PDUS) between the BSS and SGSN over a frame relay connection. Refer to Column 6, line 60 to Column 7, line 6. Although the network services layer does not specifically include a GPRS network

services layer, Nevo et al disclose that the protocol stacks are used for transport in a GPRS system, thereby requiring that the layers each support GPRS. Refer to Column 7, lines 60-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the network services layer comprises a General Packet Radio Service network services layer; the motivation being in order so the protocol stacks to accommodate a GPRS system.

Response to Arguments

5. Applicant's arguments filed October 20, 2005 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the structure disclosed by Figure 5 of Menon et al is similar to the structure disclosed by Figure 1 of Mustajarvi et al. Menon et al disclose in Figure 5 that the access router AR provides the mobile user connection with a private IP network, which further provides access to the Internet through the Internet GW. Refer to Sections 0051 and 0123. The access router AR thus provides a similar operation as a SGSN in a GPRS system. Mustajarvi et al disclose in Figure 1 that a SGSN provides the mobile user MS connection with a GPRS

backbone 13 (which can be an IP network), which further provides access to the data network PDN 11 through gateway GGSN. Refer to Column 1, lines 30-52 and Column 8, lines 10-13. Comparing Figure 5 of Menon et al and Figure 1 of Mustajarvi et al, Menon et al disclose a base station 101, an IP interface, an access router, and then a IP network, whereas Mustajarvi et al disclose a base station, a Gb interface, a SGSN, and then a IP network 13. One would be motivated to modify the base station/access router interface of Menon et al to the base station/SGSN Gb interface of Mustajarvi et al since the base station/access router interface is similar to the base station/SGSN Gb interface. Both access router and SGSN connect the base station to an external IP network and allow mobile stations access to the IP network.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2663

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng CW
July 13, 2005


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER